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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/695,681

10/29/2003

Qiming Chen

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06/22/2006

HEWLETT-PACKARD COMPANY

Intellectual Property Administration

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EXAMINER

WU, YICUN

ART UNIT

PAPER NUMBER

2165

DATE MAILED: 06/22/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/695,681

Applicant(s)

CHEN ET AL.

Examiner

Yicun Wu

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-6, 9-14, 16-18, 20-27 is/are rejected.
- 7) ☒ Claim(s) 2, 15 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>10/29/03</u> . | 6) <input type="checkbox"/> Other: _____ |

III. DETAILED ACTION

1. Claims 1-27 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the fourth paragraph of 35 U.S.C. 112: a claim in a dependent form shall be construed to incorporate by reference all the limitations of the claim to which it refers

2. Claim 24 is rejected under 35 U.S.C. 112, fourth paragraph, as based on a requirement that requires dependent claim to further limit the subject matter claimed.

The claimed, “generating a high diagonal cube based on plurality of web log records, a diagonal aggregation facility for generating a high diagonal cube” is not further limit the subject matter claimed.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 3-6, 9-14, 16-23, 25-27-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osmar R. Zaiane, Man Xin, Jiawei Han "Discovering Web Access Patterns and Trends by Applying OLAP and Data Mining Technology on Web Logs" Proc. Advances in Digital Libraries, Santa Barbara, April 1998. and Zaiane et al. hereinafter, in view of Ziauddin (U.S. Patent No. 6,493,708).

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As to Claim 1, Zaiane et al. discloses a method of aggregating data comprising the steps of:

receiving a plurality of web log records (i.e. web log data) (page 3, col. 1, lines 1-11);

and

generating a volume cube having a plurality of dimensions based on the plurality of web log records (page 3, col. 1, lines 1-11); and

generating a first summary cube at a first level of abstraction based on the volume cube (page 3, col. 2, and page 4, col. 2);

wherein the first summary cube has a plurality of cells and at least one parent dimension for each dimension of the volume cube (page 3, col. 2, and page 4, col. 2);

wherein each cell includes a value that represents a summarization of corresponding cell values of the volume cube aggregated over all the dimensions of the volume cube(page 3, col. 2, and page 4, col. 2); and

using a first summary cube (page 3, col. 2, and page 4, col. 2) to perform diagonal aggregation (i.e. quick summarization at different levels of the concept hierarchies. page 3, col. 2, and page 4, col. 1-2)

Zaiane et al. does not teach without rollup.

Ziauddin teaches without rollup (i.e. .rewrite without roll-up. Col. 8, lines 24-50).

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Zaiane et al. to include without rollup.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified Zaiane et al. by the teaching of Ziauddin to include

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without rollup with the motivation to reduce the amount of overhead when the base table has to be scanned as taught by Ziauddin (col. 3, lines 1-10).

As to Claim 3, Zaiane et al. as modified teaches a method comprising:
generating a partial aggregate along one or more dimensions by using a query that specifies at least one dimension along which the partial aggregate is to be calculated (Zaiane et al. page 3, col. 2, section 2.2).

As to Claim 4, Zaiane et al. as modified teaches a method wherein
the first summary cube includes aggregated values; and
wherein the first summary cube includes a drilldown enabling mechanism for specifying relationships between dimensions of the volume cube and the dimensions of the first summary cube for enabling drilldown analysis (Zaiane et al. page 3, col. 2, section 2.2) and (Zaiane et al. page 4, col. 2, lines 1-30).

As to Claim 5, Zaiane et al. as modified teaches a method comprising:
wherein the first summary cube includes a plurality of dimensions; and wherein each dimension corresponds to at least one dimensions of the volume cube (Zaiane et al. page 3, col. 2, section 2.2) and (Zaiane et al. page 4, col. 2, lines 1-30).

As to Claim 6, Zaiane et al. as modified teaches a method wherein the first summary cube includes:

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a first dimension for specifying an origin (i.e. transforming IP addresses to domain names) (Zaiane et al. page 3, col. 1);

a second dimension for specifying a subject (Zaiane et al. page 1, col. 2); and

a third dimension for specifying a referring site (i.e. URL) (Zaiane et al. page 3, col. 1 and page 4, col. 1).

As to Claim 9, Zaiane et al. as modified teaches a method wherein each web log record comprises a plurality of fields (i.e. web log data) (Zaiane et al. page 3, col. 1, lines 1-11).

As to Claim 10, Zaiane et al. as modified teaches a method wherein each web log record includes:

a first field for storing an IP address of an origin site (i.e. transforming IP addresses to domain names) (Zaiane et al. page 3, col. 1);

a second field for storing a target URI (i.e. URL) (Zaiane et al. page 3, col. 1);

a third field for storing a referring site (Zaiane et al. page 3, col. 1 and page 4, col. 1); and

a fourth field for storing a time (i.e. time) (Zaiane et al. page 4, col. 1).

4. As to claims 11-14, 16-23, 25-27-27, the limitations of these claims have been noted in the rejection above. They are therefore rejected as set forth above.

Allowable subject Matter

5. Claims 2, 15 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

6. The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record (Zaiane et al. and Ziauddin) does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims): generating a second summary cube at a second level of abstraction based on the first summary cube; wherein the second summary cube has at least one parent dimension for each dimension of the first summary cube; wherein the second summary cube is generated by limiting the dimensions of the first summary cube to a range of values above a predetermined value, as claimed in claim 2.

The prior art of record (Zaiane et al. and Ziauddin) does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims): generating a first cube for ranked list of elements of a particular dimension, where a feature is represented by a dimension; and generating a second cube for one of volume and probability distribution corresponding to the ranked list of elements of a particular dimension, as claimed in claim 15.

The prior art of record (Zaiane et al. and Ziauddin) does not disclose, teach or suggest the claimed limitations of (in combination with all other features in the claims): generating multilevel and multidimensional feature ranking cubes for ranking web access along multiple

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dimensions and at multiple levels; wherein the feature ranking facility generates a first cube for ranked list of elements of a particular dimension, where a feature is represented by a dimension; and generates a second cube for one of volume and probability distribution corresponding to the ranked list of elements of a particular dimension, as claimed in claim 19.

Claims 7-8 are objected to as being dependent from the objected to dependent claim 2.

Other Prior Art Made of Record

7. The prior art made of record and not relied upon is considered pertinent to Applicant's disclosure. U.S. patents and U.S. patent application publications will not be supplied with Office actions.


Examiners advises the Applicant that the cited U.S. patents and patent application publications are available for download via the Office's PAIR. As an alternate source, all U.S. patents and patent application publications are available on the USPTO web site (www.uspto.gov [<http://www.uspto.gov/>](http://www.uspto.gov/)), from the Office of Public Records and from commercial sources. For the use of the Office's PAIR system, Applicants may refer to the Electronic Business Center (EBC) at <http://www.uspto.gov/ebc/index.html> or 1-866-217-9197.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yicun Wu whose telephone number is 571-272-4087. The examiner can normally be reached on 8:00 am to 4:30 pm, Monday -Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone numbers for the organization where this application or proceeding is assigned are 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-2100.



Yicun Wu
Patent Examiner
Technology Center 2100

June 20, 2006